

## THEY ALL BEGAN WITH A SHELL

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Money, purple dye, oil lamps, window panes, a marriage custom, certain religions and even a security pact—a curious assortment of ideas, yet all had their origin in some kind of shellfish.

When the human race was young shellfish played a much more important part in man's affairs than now, for without exercising either strength or skill coast-dwelling primitive man had a readily available supply of wholesome food in mussels, clams, oysters and whelks. The discarded shells which soon littered the camp sites of early man provided a durable material for the fashioning of rough scrapers, knives and fishhooks.

From these simple utilitarian beginnings emerged certain arts, beliefs and customs, some of which I shall now describe. Actually our monetary system and the marriage custom of throwing rice, or its modern equivalent, confetti, had a common origin in the tropical cowry shells. These shells were cherished by the ancients as symbols of good omen and in particular as fertility and regeneration charms. Collection of numbers of these shells became a necessary part of a bridal dowry, in ancient times, a custom that still prevails in the alternative fertility charm symbolised by the grain of rice. A parallel development was the employment of cowry shells as exchange for goods, an improvement on direct bartering methods.

Down the centuries cowry shell currency became standardized in the Orient, particularly in India and later in Africa. One species (*Cypraea moneta*), the money cowry, was used, and its value ranked in India during most of the nineteenth century at 3800 shells to the rupee, then equivalent to 2/- sterling.

There is a story of an Englishman resident in Bengal about 1820 who paid for the erection of his bungalow entirely in cowry shells. The sum involved was 4000 rupees, and the number of shells necessary for the transaction was sixteen million.

It requires no great stretch of the imagination to realize the significance of our slang term "shelling out," just as the term salary dates back to the early Eastern practice of payments in salt.

Many other kinds of shell money are known, but all differed in that they were manufactured, the labour and finish bestowed upon the product contributing largely to its worth.

The North American Indians had two forms of shell money, wampum of the eastern tribes, and allicochick of the Californian Indians. Wampum featured in the early days of the Hudson Bay fur trade until the company changed to a bartering method, using blankets. This form of money consisted of cylindrical beads ground from clam shells, and its value was 9d. to 1/6 per yard. The currency was declared illegal in 1862 owing to depreciation caused by unscrupulous early settlers who devised mechanical means of mass producing wampum.

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It seems that an ancient Scot first devised a receipt from shells, for an ancient legend discloses that an ordinary cockle was used for the purpose, the parties to a transaction each retaining one half of the shell. If you try to match odd valves of ordinary cockles, you will soon find that it is next to impossible to fit two disassociated halves that did not grow together.

Next we come to Tyrian Purple, a celebrated dye with the ancient Mediterranean peoples, which was manufactured from the crushed bodies of a sea shell (*Murex brandaris*), probably the first dye to be permanently fixed to wool and linen.

The art of purple dyeing probably originated in Babylon, but it was the Phoenicians who exploited the process, and their trade supremacy of the times was built up to a considerable extent by the distribution of this costly commodity.

It took thousands of shellfish to make an ounce or so of dye, and this, coupled with a long and intricate process, made the product so expensive that only the very wealthy could afford the coveted purple robes. In time the wearing of purple became the restricted privilege of kings and priests, and so to-day we have the survival of the idea in Royal purple and the Cardinal's robes.

Another article that had a primitive beginning based upon the use of a shell is the ordinary oil or kerosene lamp. It was simply a spiral type of shell suspended horizontally with strings. The cavity contained oil, obtained by rendering down sea birds and whale blubber, and in it was immersed a wick that protruded over the edge of the shell. This kind of lamp persisted in all its simplicity until a few decades ago at the Shetland Islands. I was much interested to note one of these lamps in one of the interior shots in the film "Man of Arran" which was shown in Auckland about twenty years ago.

Long before Western civilization became acquainted with the use of glass windows, the people of southern China and Malaya used the thin, semi-transparent *Placuna* shell as window panes.

Such windows persist in the Philippines, where almost every house, and even the modern multi-storied Manila hotels have their shell windows. The flat *Placuna* shells are trimmed to three-inch squares and set in latticed cedar frames. They are only semi-transparent, but admit an abundance of mellow light without heat.

Prior to the accidentally devised blotting paper, handwriting was dried by means of "pounce," a dusting powder ground from the internal shell of the cuttle-fish, a near relative of the octopus. The same creature has the ability of clouding the water with a brownish substance to facilitate escape from their enemies. This substance provided the pigment for the manufacture of the artists' colour, sepia.

A child of to-day places a sea shell to the ear and is momentarily fascinated by the illusion of sounds of sea and surf that issue from the shell. The child of to-day, however, knows that there is bound to be a simple explanation for this minor miracle, and either dismisses the problem or with a flash of intuition associates it with the amplifying apparatus of the familiar radio. To the child-mind of ancient man these sounds of the sea associated with the shell had a much deeper significance. To

him this was the voice of the god of the sea—and thus the shell trumpet became the logical instrument for invoking any deity associated with the sea.

Actually the phenomenon is capable of simple explanation, for the shell does act as an amplifier of those sounds that are too weak to be picked up by our unaided ears. Similar but less perfect reception of these sounds may be gained by simply arching the palm of the hand over an ear.

The use of shells as trumpets is very ancient, and has become almost world-wide. They were used by primitive man away back in Neolithic times, and they are still in use by the natives of Melanesia and Polynesia.

The Maoris fashioned trumpets by cutting off the end of the spire of a shell and adding an elaborately carved wooden mouthpiece, but the Melanesians simply bored a round hole in the side of the shell at a short distance from the tip of the spire. Of the two methods, the latter seemed to produce the more resonant, deeper and better carrying note.

"To blow one's own trumpet" undoubtedly originated in the early days of the shell-trumpet. Even in Japan, where shell trumpets were used in civil affairs for issuing warnings of fires, riots and robberies, there is the current expression, "Ano hito wa hora wo-fuku," which means—he blows the triton horn, or more concisely, he is bragging.

In India a different kind of shell, the "chank," is widely used as a trumpet with special religious significance. The Brahmins recite a prayer to their god, Vishnu, who is usually depicted with a "chank" shell in his hand. All devout Brahmins possess one of these shells, which is held in the hand as the prayer to Vishnu is recited. So great is the demand for these shells in India that an important fishing industry operates for this purpose alone. Bangles and feeding spouts for babies are fashioned from the shells also, still with the same devout purpose in view.

Postage stamp collectors will find a conventionalized representation of the "chank" as the central motif in the design of the stamps of the Indian Native State of Travancore.

We must now consider the higher significance of shells with certain people. For instance, the late Dr. Malinowski, who studied the culture of the natives of the D'Entrecasteaux archipelago off the eastern end of New Guinea, records an extremely interesting social system which he termed the "Kula Ring."

This is based primarily upon the circulation of two articles of high value but of no real use; they are arm-shells made from a large *Conus* shell and necklets of red shell-discs.

The necklets, Soulava, always travel clockwise, and the arm-shells, Mwali, in the opposite direction. The exchange of these articles occasions much ceremony, and the real business of the exchange of useful commodities is transacted later between the people that have entered into partnership through the Kula exchange. Each partnership becomes a firmly established life-long affair. An old chief may in the course of his life establish relationship with a hundred or more partners in neighbouring islands, and the value of this can be readily understood when it is explained that all partners in the Kula are under mutual

obligations to trade with each other, as well as to offer protection, hospitality and assistance whenever needed.

An example of a kula expedition is as follows: A fleet sets sail from Sinaketa bound for the island of Dobu, to the south. An intermediate stay is made at the Amphlett Group, but the fleet soon sails again for Dobu, where the real ceremony of the kula takes place. Here the Dobuans present their visitors with Soulava necklaces made of *Spondylus* shells, and later much trading takes place.

All the transactions in Dobu concluded, the party receive their parting gifts, sail back, and in due time, after a year or so, the Dobuans will make their return expedition to Sinaketa, with exactly the same ceremonials and magic. On this expedition, they will receive some *Conus* armshells in exchange for the necklets previously given, and others, as advance gifts towards the next Kula transaction.

Every really good Kula article has its individual name; round each there is a sort of history and romance in the traditions of the natives.

That the kula articles are seldom worn even as ornaments and are not of any real use may make us wonder why these natives place such store upon such articles. However, Dr. Malinowski, who has written at great length upon the kula system, points out an interesting analogy that will help us to understand the natives' point of view.

He described a visit he made to Edinburgh Castle, where he was shown the Crown jewels, too ostentatious, ungainly and valuable to be worn, yet they are greatly prized for the sheer sake of possession.

Until recent years the Melanesians relied greatly upon shell as a material to fashion a variety of everyday articles. One shell, the baler or melon shell (*Melo*) served as a pot to cook the enclosed animal, by placing it in hot embers; the same shell, as the first name implies, made an excellent canoe baler. The prized item, however, was the giant clam (*Tridacna*) of the coral reefs, which sometimes attains a weight of 500 pounds and a length of over three feet. This shell, by its strength and toughness, provided the raw material for the manufacture of adzes at the Gilbert Islands, which, being of coral formation, furnished neither rock nor durable materials other than shell from which tools and weapons could be fashioned. Thus they had adzes, gouges, scrapers, drills and utensils all fashioned from shell.

With the Maori people a great variety of shellfish were used as food, but only the shell of the paua and one or two others were used. The use of paua was largely decorative for forming the flashing baleful eyes of carvings, but it served a very useful purpose also in the making of fishhooks, particularly trolling spinners for the capture of kahawai and kingfish.

In our modern civilization not many shellfish serve purposes other than for food. Most of the early usages have been supplanted by more efficient and cheaper synthetics. It probably cost the equivalent of hundreds of pounds to make an ounce of purple dye in Phoenecian times—to-day the same amount of dye can be produced by chemical means for a fraction of a penny.

One shell art still survives in the carving of cameos. Originally cameos were carved from banded onyx, a form of agate, but now a West



Indian shell (*Strombus gigas*) is used, and most of the carving is done in Italy.

A use of shellfish that will probably never die in spite of synthetic substitutes is the fashioning of pearls into articles of personal adornment.

A clever Japanese, Dr. Mikimoto, originated the now thriving Japanese pearl culture industry, the basis of which is the introduction of a small foreign body into the living oyster, which year by year coats this cause of irritation with successive layers of pearl until a fine gem results. A pearl, however, can be of no better quality than the mother-of-pearl of the oyster that forms it, and unfortunately for the Japanese the quality of the mother-of-pearl in their oyster is inferior to that of the Australian, Ceylon and Pacific Island oysters.

Certain fresh-water shells produce pearls also, and for many centuries a Scottish pearl industry was carried on. This industry is quite ancient—in fact, stories of fabulous pearls from Britain was one of the minor inducements behind Caesar's invasion of Britain.

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## RADULAE OF FOUR GASTEROPODS FROM SOUTH AUSTRALIA AND NEW ZEALAND

(Text figs. 1-4.)

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The radulae of four gasteropod species are here described and figured. Two species are from South Australia, and two from New Zealand. The new generic name *Austrancilla* is proposed for *Baryspira edithae* (Pritchard and Gatliff) in which the opercular nucleus is situated on the pointed lower end of the operculum, and the shell is maculate. In radular formula *Austrancilla edithae* stands near *Baryspira*, but in the nature of the operculum it resembles *Turrancilla*.

1. *Anisodiloma lugubris* (Gmelin). Text fig. 1. The shell of this species has not a distinct tooth on the columellar margin of its aperture, but the radula shows close relationships with the *Monodonta* group in having the quadrate central tooth with a broad frontal margin and a large membrane on each side. This is the type species of the New Zealand genus *Anisodiloma* Finlay.

2. *Micrelenchus dilatatus* (Sowerby). Text fig. 4. The central tooth is rather narrow, and has a broad membrane on each side. This feature indicates that the genus is one of the *Cantharidus* group. This is also a New Zealand shell.

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